

REMARKS

In the Advisory Action mailed April 24, 2006, the Examiner checked boxes 3(c) and 7(a), according to which the Examiner did not enter the proposed After Final Rejection claim amendments of April 12, 2006.

STATUS OF THE CLAIMS

Claims 1-26 are pending in the application.

Claims 5, 9, 15, and 18-22 are allowed.

Claims 1, 2, 4, 6, 7, 10, 12, 16, 17 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Tateyama (US 006018816A).

Claims 3, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Tateyama and further in view of Perlman (US 5,398,242).

Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Tateyama and further in view of Ching et al. (U.S. 4,665,514).

According to the foregoing, the claims are amended, and, thus, the pending claims remain for reconsideration, which is respectfully requested. No new matter has been added.

REJECTIONS

This is in response to the final Office Action and Advisory Action Continuation Sheet mailed April 24, 2006.

The rejected independent claims are 1, 10, 12, 13, 16, 23 and 24.

The Advisory Action continuation sheet provides if disclosure of Limb is prior to the time at which IEEE adopted the 1394 standard, "this does not preclude the teachings of Limb from being applied to the later-developed IEEE 1394 standard disclosed in Tateyama, as both disclosures qualify as prior art with respect to Applicant's disclosed invention." It is submitted that because Limb was prior to adoption of IEEE 1394 standard, Limb cannot support a suggestion or motivation to one skilled in the art to be modified to become an IEEE 1394 standard. Applicants note that the rejection is articulated as Limb in view of Tateyama, so essentially, the Examiner's rejection rationale provides that Tateyama, which discusses an IEEE

1394 standard, allegedly suggests to one skilled in art to modify Limb to become an IEEE 1394 standard network. The final office action page 4 provides that one skilled in the art would be motivated to implement Limb using nodes constituting an IEEE 1394 topology, as shown by Tateyama, because IEEE 1394 is widely used in the art, enabling standardized communication. However, it is submitted, this rejection rationale does not meet a prima facie case of obviousness, because no evidence has been provided that one skilled in the art would be motivated to modify an older type of network standard, first, to become a newer network standard (i.e., to modify Limb's system, in which a plurality of stations are interconnected by a pair of signal paths, to be implemented as an IEEE 1394 topology) **and, second, to further modify Limb's system implemented as an IEEE 1394 topology to achieve the claimed present invention's IEEE 1394 "write packet."** The Advisory Action Continuation Sheet alleges "Limb's write cycle "frame" reads upon the "write packet" of the present invention."

According to the foregoing, the rejected independent claims 1, 10, 13, 16, 23 and 24 are amended to further emphasize the patentably distinguishing features of the present invention. Rejected independent claim 12 is amended to improve form.

It is submitted that even if one modified Limb as an IEEE 1394 network or based upon a Limb modified IEEE 1394, a Limb modified IEEE 1394 network fails to disclose the claimed present invention's "storing **data to be written in a data portion of a packet addressed to the third node** in the data portion of **the write packet at the second node**," because Limb involves the physical network protocol layer for isochronous transmissions (i.e., writing cycles for accessing the bus). Limb column 3, lines 31-56 expressly discusses "... To this end, the present invention proposes that commencement of each station writing cycle is determined by a signal on the other path (line) which resets the station to a new cycle ..." In contrast, the claimed present invention as recited in rejected independent claims 1, 10, 13, 16, 23 and 24 involves "transferring **a write packet** from a first node to a second node, when a plurality of nodes, including the first node, the second node and a third node, connect by a bus but not connect in a ring form and **the plurality of nodes constitute an IEEE 1394 topology.**" Limb fails to disclose or suggest to one skilled in the art to modify an IEEE 1394 network to include a "**write packet**".

The Advisory Action Continuation Sheet provides that Applicant's discussion of differences relies on details of the specification that are not claimed, and that Limb's write cycle "frame" reads upon the "write packet" of the claimed present invention. However, Limb does not

reasonably disclose to one skilled in the art that Limb's discussion of physical layer writing cycles is same as the claimed present invention's "**write packet**" provided in an IEEE 1394 network, because, for example, claim 1 expressly recites "storing **data to be written in a data portion of a packet addressed to the third node** in the data portion of **the write packet at the second node.**" Therefore, this claim recitation clarifies two types of packets "**a packet addressed to the third node**" and "**a write packet.**" Limb is silent on the claimed present invention's **IEEE 1394 "write packet."**"

The rejected independent claims 1, 10, 13, 16, 23 and 24, using claims 1 and 16 as examples, are amended for further clarity as follows:

1. (CURRENTLY AMENDED) A method comprising:

transferring a write packet from a first node to a second node, when a plurality of nodes, including the first node, the second node and a third node, connect by a bus but not ~~connect~~connected in a ring form and the plurality of nodes constitute an IEEE 1394 topology;

determining at a link layer processor of the second node whether a received packet is the write packet;

storing data ~~addressed to the third node and to be written in a data portion of a packet, in~~ ~~addressed to the third node in~~ the data portion of the write packet at the second node; and

transferring the write packet from the second node to the third node.

16. (CURRENTLY AMENDED) A packet transfer control circuit, comprising:

a processor as a first node ~~among a plurality of nodes, which include the first node and a plurality of second nodes, not connected in a ring form and constitute an IEEE 1394 topology, transfers~~ ~~transferring to each second node~~ the plurality of second nodes a write-packet ~~determinable as a write packet at a data link layer processor of the plurality of second nodes, the data portion of which stores data, when a plurality of nodes, including the first, second and third nodes, are not connected in a ring form and the plurality of nodes constitute an IEEE 1394 topology, and then transferring another write packet, the data portion of which is blank, wherein each second node stores data in the blank data portion and transfers of the write packet to the third nodes.~~

For example, the present Application page 11, lines 29-31, support the claim

amendments. See also, page 15, line 5 to page 16, line 24. Thus, a *prima facie* case of obviousness cannot be established based upon Limb and Tateyama, because Limb discusses “**a frame**” of a writing cycle in which a data packet can be transmitted. Limb’s column 6, lines 26-60 and FIG. 6 discuss “**a frame**” has two parts a control field 20 and a data field 21. **The data field 21 receives data packets from the stations.**” Therefore, the claimed present invention’s “**write packet**” differs from Limb’s discussion of a writing cycle frame in which a data packet is transmitted. In contrast to Limb’s discussion of a “**frame**,” the claimed present invention’s “**write packet**” is generated above the link layer (FIG. 5) with node address information to be analyzed by the link layer, which differs from Limb’s “**frame**.” In other words, for example, Limb does not differentiate what type of data packet is in the frame’s data field 21. The present application page 9, line 25, discusses the different types of a packet the packet transfer control circuit 11 processes, namely, “a normal packet” 21 or “**a write packet**” 22. See, allowed independent claim 19. According to the embodiments of the claimed present application, blank write packets 22 are transferred from certain nodes at certain time for a more efficient data transfer other than normal data packets in an IEEE 1394 network (see present application page 22, lines 26-32). Therefore, the claimed present invention’s “**write packet**” differs from Limb’s “**frame**.” Thus, a *prima facie* case of obviousness cannot be established based upon Limb and Tateyama, because Limb fails to disclose or suggest to one skilled in the art to modify an IEEE 1394 network to provide “determining at a link layer processor of the second node whether a received packet is the write packet; storing data addressed to the third node and to be written in a data portion of a packet, in addressed to the third node in the data portion of **the write packet at the second node; and transferring the write packet from the second node to the third node**” (e.g., amended claim 1).

Further, in contrast to Limb and Tateyama, the claimed present invention as recited in amended independent claim 12 provides:

12. (CURRENTLY AMENDED) A packet transfer control circuit incorporated in a first node to transfer a packet to a second node and a third node, in which the first node, the second node, and the third node are not connected in a ring form, and the first, second and third nodes are among a plurality of nodes constituting an IEEE 1394 topology, the packet includes a data portion for storing data, the second node is downstream from the first node, and the third node is upstream from the first node, the first node control circuit comprising:

a processor to perform a multiplex transfer by processing data, which is addressed to the third node and stored in a data portion of a packet received from the second node, temporarily retaining the processed data addressed to the third node, and performing a multiplex transfer of the retained data and the data stored in the data portion of the packet received by the first node from the second node by rewriting the data stored in the data portion of the packet received from the second node with the temporarily retained processed data, whenif the data stored in the data portion of the packet received from the second node is addressed to the third node.

For example, the present Application page 21, line 9+ supports the claim amendments to independent claim 12. Limb is silent on claimed present invention's "processing data, which is addressed to the third node ... temporarily retaining the processed data addressed to the third node" (present Application page 22, lines 1-5), because Limb only discusses a "frame" of a write cycle at the physical layer and does not discuss determining whether data is address to another node, processing the data, and temporarily retaining the processed data. Therefore, Limb and Tateyama fail to disclose or suggest to one skilled in the art the claimed present invention's "to perform a multiplex transfer by processing data, which is addressed to the third node and stored in a data portion of a packet received from the second node, temporarily retaining the processed data addressed to the third node, and performing a multiplex transfer of the retained data and the data stored in the data portion of the packet received by the first node from the second node by rewriting the data stored in the data portion of the packet received from the second node with the temporarily retained processed data, whenif the data stored in the data portion of the packet received from the second node is addressed to the third node."

Withdrawal of the rejection of pending claims and allowance of pending claims is respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,
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